Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of		
	)	
The Uniendo a Puerto Rico Fund and the Connect USVI Fund,	)	WC Docket No. 18 -143
	)	
Connect America Fund,	)	WC Docket No. 10-90
	)	
ETC Annual Reports and Certification	)	WC Docket No. 14-58

COMMENTS OF HUGHES NETWORK SYSTEMS LLC

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SUMMARY

Hughes Network Systems, LLC ("Hughes") supports the Federal Communications Commission's ("Commission") efforts to distribute the second stage of the Uniendo a Puerto Rico and Connect USVI Funds ("PR/USVI Funds") in the most efficient and expedient manner to facilitate the prompt deployment of advanced telecommunications infrastructure in hurricane ravaged areas. Ensuring that Puerto Rico and the U.S. Virgin Islands have restored and enhanced broadband communications, which are hardened to withstand another natural disaster, is of paramount importance to those regions.

The Commission should ensure that any allocations of the PR/USVI Funds are awarded to resilient broadband services. Accordingly, the Commission should adopt a technology neutral approach for allocating the funds that will ensure that residents of these territories will have access to broadband services that will meet their needs for the next decade and beyond. In addition, the Commission should ensure that any awards of support from the PR/USVI Funds are made through an objective and transparent process.

By adopting technology neutral standards and allocating funds using objective criteria, the Commission can achieve its important goals on expedient deployment and long-term resiliency.

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COMMENTS OF HUGHES NETWORK SYSTEMS LLC

I. INTRODUCTION

Hughes Network Systems, LLC ("Hughes") submits these comments in response to the Federal Communications Commission's ("Commission") notice of proposed rulemaking seeking inputs on how to best structure the second stage of the Uniendo a Puerto Rico and Connect USVI Funds ("PR/USVI Funds") to expedite long-term rebuilding efforts in hurricane ravaged areas.[1] Hughes supports the important objective of this proceeding to ensure that the people of Puerto Rico and the U.S. Virgin Islands have access to affordable and reliable fixed voice services and broadband-capable networks. The Commission can best achieve this goal on a timely basis, and at Commission-defined broadband speeds of 25/3 Mbps or higher, by designing a technology-neutral approach to participation for these funds on an objective basis. By ensuring that technologies such as satellite can participate in this funding opportunity, the Commission can achieve its important

[1] *The Uniendo a Puerto Rico Fund and the Connect USVI Fund, et al. Order and Notice of Proposed Rulemaking*, FCC 18-57 (2018) ("*PR/USVI Fund NPRM*").

goals on resiliency by opening up avenues for technologies to participate as both primary and complementary services.[2]

II. BACKGROUND

Hughes is the largest provider of satellite broadband services in the United States and globally, with approximately 1.2 million subscribers in the Americas, including in Puerto Rico and the U.S. Virgin Islands. Hughes provides its broadband service through the use of a three satellite, geostationary orbit ("GSO"), Ka-band constellation over the United States, which includes full coverage of Puerto Rico and the U.S. Virgin Islands. Hughes is currently in the process of constructing its next generation, Commission-licensed, Ultra-High Density Satellite, EchoStar XXIV, which will provide service throughout the Americas at speeds of 100 Mbps or more.[3] EchoStar XXIV is expected to begin service in 2021.[4]

Hughes began providing Commission-defined broadband service in Puerto Rico in July 2017[5] and in the U.S. Virgin Islands in November 2017.[6] Hughes currently provides this service to a broad mix of residential, enterprise, and government users, including the Federal Emergency Management Administration ("FEMA") and other government agencies.

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[2] *Ibid*., at ¶ 9.
[3] Press Release, Hughes Selects Space Systems Loral to Build Next-Generation Ultra High Density Satellite (Aug. 9, 2017), *available at* https://www.echostar.com/en/Press/Newsandmedia/Hughes%20Selects%20Space%20Systems%20Loral%20To%20Build%20Next-Generation%20Ultra%20High%20Density%20Satellite.aspx.
[4] *Ibid.*
[5] Prior to the start of the 2017 Hurricane Season – Hurricane Irma made landfall in the U.S. Virgin Islands on September 6, 2018; Hurricane Maria made landfall in Puerto Rico on September 20, 2017.
[6] *See* Hughes, Modification, IBFS File No. SAT-MOD-20171204-00163 (Dec. 4, 2017); *see also* Hughes, Special Temporary Authority, IBFS File No. SAT-STA-20171108-00152 (Nov. 8, 2017).

The role of satellite technology, and Hughes' HughesNet Gen5[7] in particular, has been, and continues to be, critical to the 2017 Hurricane Season relief effort.[8] For example, in Puerto Rico and the U.S. Virgin Islands, Hughes and ResponseForce1 supported the FEMA Air Bridge, deploying VSATs and solar generators to get the Islands' airports back up and operational.[9] Hughes is also responsible for providing VSAT service to San Cristobal Hospital in Ponce, ensuring that medication and supplies can be ordered, and critical care patients can be evacuated.[10]

Throughout the on-going hurricane recovery process, Hughes continues to provide satellite broadband services to residential and enterprise customers at Commission-defined broadband speeds, ensuring that families stay connected and businesses remain operational.[11] Through the continuing connectivity provided by Hughes satellite broadband services in these disaster stricken regions, retail customers, including wholesalers, drug stores, and other venders are able to carry on business as usual, allowing residents to process insurance claims, make credit card transactions, and purchase groceries using government issued food stamp debit cards.[12] In fact, the Liga de

[7] HughesNet Gen5 is Hughes' fifth generation high-speed satellite Internet service launched in March 2017. Gen5 offers residential consumers baseline speeds of 25 Mbps down, 3 Mbps up, while enterprise customers can opt for higher speed packages of 55 Mbps down, 5 Mbps up. The Gen5 service also eliminated hard data caps for satellite broadband subscribers. For more information on HughesNet Gen5, visit: https://www.hughesnet.com/about/hughesnet-gen5.
[8] *See* Comments of Hughes, PS Docket No. 17-344 et. al., Jan. 22, 2018 ("*Disaster Relief Comments*").
[9] Hughes Blog: Response Force 1, last visited Jul 5, 2018, *available at* https://www.hughes.com/disaster-relief-support/response-force-1.
[10] *Ibid*.
[11] *See* Disaster Relief Comments.
[12] Hughes Blog: Coama Finds Connection in Isolation, last visited Jul. 5, 2018, *available at* https://www.hughes.com/disaster-relief-support/coamao-finds-connection-isolation.

Cooperativas de Puerto Rico has stated that satellite broadband "was the only reliable communications system in the aftermath of the hurricanes."[13]

Despite the devastation on the Islands, Hughes has also been able to connect new residential and enterprise customers throughout the relief effort, increasing subscribership, and demonstrating the value of resilient, alternative broadband technologies. Additionally, Hughes is supporting key government agencies in their relief efforts in Puerto Rico and the U.S. Virgin Islands, including FEMA, the National Weather Service, Department of Defense ("DoD"), and Customs and Border Patrol ("CBP").[14]

III. DISCUSSION

Hughes supports the Commission's plan for making additional funding available to ensure the restoration and expansion of voice and broadband services in Puerto Rico and the U.S. Virgin Islands. In providing this funding, the Commission has a responsibility to the residents of Puerto Rico and the U.S. Virgin Islands to ensure that they have access to high-speed, reliable broadband services. By awarding funds on an objective, technology neutral basis, the Commission will ensure that the residents of these disaster stricken areas are receiving the most expedient, equitable, and cost-effective solution that meets the goals of both the Commission and the Islands.

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[13] Comments of Liga de Cooperativas de Puerto Rico, WC Docket No. 18-143 et. al., Jul. 2, 2018 ("Liga de Cooperativas Comments").

[14] Using a Hughes VSAT to make VoIP calls to DoD and FEMA, the National Weather Service was able to orchestrate an evacuation of 70,000 people downstream from the damaged and high-risk Guajataca Dam. FEMA has used Hughes services extensively during the response effort and will continue to do so for the foreseeable future. In November alone, in the immediate aftermath of the hurricanes, FEMA relied on Hughes satellite-based services to place over 30,000 calls .Jack Corrigan, "How Puerto Rico is Rebuilding Its Network Three Months After Maria," Nextgov (December 19, 2017), *available at* http://www.nextgov.com/emerging-tech/2017/12/how-puerto-rico-rebuilding-its-network-three-months-after-maria/144686/.

A. THE COMMISSION MUST NOT ESTABLISH ARBITRARY BARRIERS FOR SERVICE PROVIDERS TO PARTICIPATE IN THE PR/USVI FUND

Given the urgent need for services in Puerto Rico and the U.S. Virgin Islands, Hughes supports the Commission's goal of limiting participation in the PR/USVI Funds to established providers with proven track records of providing services to the Islands. The details of the Commission's proposal, however, actually exclude providers, like Hughes, who possess these exact qualifications. Hughes therefore opposes the Commission's specific proposal to only include as eligible providers those operators who were providing broadband service prior to June 2017, as reflected in the June 2017 Form 477 data.[15] This is an arbitrary date and it is irrelevant to whether a service provider is able to expediently deploy to meet the needs of the residents of Puerto Rico and the U.S. Virgin Islands. The Commission justifies its proposal to limit participation based on the June 2017 Form 477 data on the unfounded assumption that these providers are in a better position to rebuild and expand service in these territories.[16] This proposal arbitrarily excludes operators, such as Hughes, who were in operation or had coverage of Puerto Rico and the U.S. Virgin Islands prior to the first storm and who actively support the relief effort.[17]

Neither of the Commission's expressed concerns justifies excluding Hughes from eligibility to participate. While the Commission wants to ensure that eligible participants are well-equipped "to rebuild and expand service as quickly as possible,"[18] Hughes is up and operational in Puerto Rico

[15] PR/USVI Fund NPRM, at ¶ 18.
[16] *Ibid*., at ¶ 42.
[17] Hughes began commercial service in Puerto Rico in July 2017, and having coverage of the U.S. Virgin Islands with its EchoStar XIX/Jupiter 2 satellite, amended its authorization and began providing service immediately upon receiving a request for service from FEMA in November 2017.
[18] PR/USVI Fund NPRM, at ¶ 18.

and the U.S. Virgin Islands, with complete coverage, today. Unlike other providers, Hughes has been able to maintain the provision of services despite the hurricanes, and, in fact, began providing service in the U.S. Virgin Islands shortly after Hurricane Maria.[19] Today Hughes provides a robust broadband service to the residents of both territories, as well as to U.S. government customers and critical businesses; it is equipped now to accomplish the Commission's goals. With no last-mile build out requirements, satellite broadband is the quickest and simplest service to deploy as part of the Commission's restoration and expansion of Puerto Rico and the U.S. Virgin Island's telecommunications networks.

The availability of satellite broadband has been vital to the recovery efforts in Puerto Rico and the U.S. Virgin Islands, especially as residents attempt to return to daily life. As Liga de Cooperativas notes, satellite broadband services were the "only reliable communications system" following Hurricane Maria.[20] To this end, Liga de Cooperativas, other residents, and telecommunications industry participants in Puerto Rico have established a satellite connected network to ensure that the communities they serve will "remain connected to each other, to emergency services, to community organizations…regardless of storm or emergency severity."[21] To exclude satellite broadband providers, such as Hughes, from participation in the PR/USVI Funds based on an arbitrary service date would be a "grave oversight."[22]

Moreover, Hughes has the "established track record" the Commission expressly desires to reduce the risk that eligible participants default on their service obligations.[23] Hughes has been

[19] *See* note 17 *supra*.
[20] *See* Liga de Cooperativas Comments.
[21] *Ibid*.
[22] *Ibid*.
[23] *See* note 17 *supra*.

providing broadband services to consumers, businesses and government in North America since 2008 and has an illustrious record of providing not only reliable, ubiquitous broadband coverage but also critical recovery support.[24] If the Commission is serious about its intention to quickly and efficiently deploy voice and broadband services in these territories, it must eliminate the June 2017 Form 477 qualifier and permit all established service providers to participate.

B. PUERTO RICO AND THE U.S. VIRGIN ISLANDS ARE ENTITLED TO HIGH-SPEED COMMISSION-DEFINED BROADBAND SERVICE

The 2017 hurricanes wreaked havoc on Puerto Rico and the U.S. Virgin Islands. In the wake of a historic catastrophe, the Commission's proposed PR/USVI Funds create a unique opportunity. The Commission has, to its credit, recognized the need to rebuild, improve, and expand the telecommunications infrastructure available in these territories. But the Commission's proposal would squander this once-in-a-generation opportunity to implement a full-scale modern broadband infrastructure and instead relegate our fellow Americans in these regions, for the next ten years, to service levels the Commission itself no longer considers sufficient for broadband today.

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[24] In a recent speech before the Mackinac Center for Public Policy, Commissioner O'Reilly highlighted this same propensity by regulators to exclude satellite broadband from consideration:

> More recently, we have seen comments, including those by my fellow Commissioners, that the FCC's 2018 Broadband Deployment Report indicated that 24 million Americans do not have "broadband." However, this number represents those Americans without *wired* broadband. The real unserved population is 14 million, as 10 million households have satellite broadband of sufficient speed and functionality to meet our measurements. So why doesn't satellite broadband count in the minds of some, including certain regulators?

Remarks of Commissioner Michael O'Reilly, "Smart Regs for Smart Tech: How Government Can Allow Next Gen Internet Networks to Flourish." (Mackinac Center for Public Policy, June 20, 2018) (emphasis in original) *available at* https://docs.fcc.gov/public/attachments/DOC-351816A1.pdf.

The Commission should not adopt its proposal to require only 10/1 Mbps speeds from recipients of support for fixed services, for which it offers no justifications. Rather, for the reasons set out below, the Commission should require that eligible providers commit to offer no less than 25/3 Mbps over the term of support, which is the minimum speed for a service to qualify as "broadband" under the Commission's own definition.[25]

First, the Commission states that its objective is to ensure that the service is rebuilt "quickly and efficiently," while "improving" the networks where "feasible" and hardening them against future disasters.[26] Hughes currently provides and has available Commission-defined fixed broadband service in both of these territories, and has since the 2017 Hurricane Season.[27] Hughes' continued ability to offer these services in both Puerto Rico and the U.S. Virgin Islands demonstrates both the ability to provide Commission-defined broadband services of 25/3 Mbps to the entirety of these territories, as well as the resilience of a satellite broadband network that is able to provide reliable broadband service immediately following a natural disaster.[28] As Hughes has already demonstrated the "feasibility" of providing complete coverage with a hardened network at 25/3 Mbps in these regions, the selection of any fixed service that offers less than Commission-defined broadband would demonstrate a failure to objectively provide the best possible solution for the residents of Puerto Rico and the U.S. Virgin Islands.

[25] Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, 2018 Broadband Deployment Report, 33 FCC Rcd. 1660, 1665 ¶ 15 (2018) ("2018 Broadband Deployment Report").
[26] PR/USVI Fund NPRM, at ¶ 33.
[27] *See* notes 5 and 6 *supra*.
[28] As Liga de Cooperativas states in its comments, "Advances in technology now offer next-generation satellite system [*sic*] that can provide Puerto Rico with the latest technology and ever-increasing broadband speeds." Liga de Cooperativas Comments, note 13 *supra*.

Second, the Commission has shown in other contexts that it wants higher speeds from high-cost recipients. In the Connect America Phase II Auction, bidders are rewarded for bidding to provide speeds at 25/3 Mbps or even higher, and penalized for bidding to provide only 10/1 Mbps.[29] Similarly, the Commission has required carriers accepting Alternative Connect America Fund Model support to provide 25/3 Mbps service to a defined number of locations, and just recently proposed to increase the size of that program and the number of locations that would receive 25/3 Mbps.[30] Residents of Puerto Rico and the U.S. Virgin Islands deserve at least as much.

Third, the Commission has time and time again extoled the benefits that modern broadband services can bring to unserved and underserved populations: telehealth, education, civic engagement, and economic opportunity.[31] The Americans in Puerto Rico and the U.S. Virgin Islands live in some of the most impoverished areas of the country[32] and thus have tremendous

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[29] Connect America Fund Phase II Auction Scheduled for July 24, 2018 Notice and Filing Requirements and Other Procedures for Auction 903, Public Notice, 33 FCC Rcd. 1428, 1433-34 ¶ 12 (2018).

[30] Connect America Fund et al., Report and Order, Third Order on Reconsideration, and Notice of Proposed Rulemaking, WC Docket No. 10-90 et al., FCC 18-29, ¶¶ 67, 131 (rel. Mar. 23, 2018) (increasing the number of locations that will receive 25/3 Mbps and proposing to require the same from additional carriers accepting A-CAM support).

[31] *See, e.g.*, 2018 Broadband Deployment Report at 1661 ¶ 1 ("Americans turn to advanced telecommunications capability for every facet of daily life, using both fixed and mobile broadband services to communicate and to access the Internet. Fixed and mobile broadband services provide Americans, especially those in rural and remote areas of the country, access to numerous employment, education, entertainment, and health care opportunities.").

[32] 45% of Puerto Ricans and 22% of U.S. Virgin Islanders lived below the poverty rate prior to the 2017 Hurricane Season. *See* U.S. Census Bureau, American FactFinder, https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_5YR_DP03&src=pt#none (last visited July 20, 2018) (estimating poverty rate in Puerto Rico based on American Community Survey responses). U.S. Census Bureau, American FactFinder https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_VISF_PBG78&prodType=table (last visited July 20, 2018) (estimating poverty rate in the U.S. Virgin Islands based on data from the 2010 Census).

amounts to gain from better access to the Internet.[33] The economic situation in Puerto Rico is particularly troubling: Before the storms, more than 40 percent of Puerto Ricans lived below the poverty line and had an unemployment rate of 10 percent; the results of a decade-long long recession.[34] While parts of the Island have been able to recover, farther away from the cities the failed infrastructure has made repairs and rescue more difficult.[35] The PR/USVI Funds should be used to leapfrog these areas to modern services to which 92.3 percent of their fellow Americans had access in 2016,[36] and that can be expected to withstand the next hurricane.[37]

Finally, a true competitive bidding process (which Hughes supports, as described below) will reveal what speeds providers are able to offer at efficient support amounts. The Commission should not artificially depress the speeds to which our fellow citizens in Puerto Rico and the U.S. Virgin Islands could have access. Rather, the Commission should require providers to put forth their best offers at or above 25/3 Mbps to fulfill this unique opportunity to improve the lives and welfare of our fellow citizens.

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[33] *See e.g.* Carmen Scutaro and Gloria Tristani, "Cutting off communications for Puerto Rican hurricane victims is just cruel" The Hill (May 31, 2018), *available at* http://thehill.com/opinion/energy-environment/387481-cutting-off-communication-for-puerto-rican-hurricane-victims-is (before the 2017 hurricanes, more than half a million Puerto Rican households were Lifeline recipients – the Island has a total population of 3.4 million).

[34] *See e.g.* Colleen Long, "Hurricane Maria recovery highlights Puerto Rico inequalities" Chicago Tribune (Oct. 27, 2017), *available at* http://www.chicagotribune.com/lifestyles/pets/sns-bc-cb--hurricane-maria-the-rich-and-the-poor-20171025-story.html.

[35] Sheri Fink, "Puerto Rico's Hurricane Maria Death Toll Could Exceed 4,000, New Study Estimates" The New York Times (May 29, 2018), *available at* https://www.nytimes.com/2018/05/29/us/puerto-rico-deaths-hurricane.html. (According to a new Harvard research study, roughly one third of the deaths in the aftermath of Hurricane Maria can be attributed to a delay in medical care or the inability to receive it.)

[36] 2018 Broadband Deployment Report at 1681 ¶ 50 (Table 1).

[37] PR/USVI Fund NPRM, at ¶ 34; *see also* note 28 *supra*.

Without a factual basis to justify a lesser standard of service to be provided in Puerto Rico and the U.S. Virgin Islands than Commission-defined broadband, the Commission must revisit its approach to ensure that available funds are not being diverted to a lower quality service when services meeting or exceeding the Commission's definition for advanced broadband networks are available for expedient deployment within these territories.

C. THE COMMISSION MUST BE TECHNOLOGY NEUTRAL AND ENABLE THE USE OF RESILIENT TECHNOLOGIES TO BRING BROADBAND SERVICES TO PUERTO RICO AND THE U.S. VIRGIN ISLANDS

As result of Puerto Rico and the U.S. Virgin Islands' geographic location, they are particularly vulnerable to heavy storms and other natural disasters that necessitate the installation of hardened, resilient networks. As the recent hurricanes have demonstrated, the most resilient communications technology is satellite broadband infrastructure: it is able to withstand the storms and continue to provide much needed service when other communication platforms are down.[38] Despite this stellar record of service, the Commission continues to propose rules, such as a 100 millisecond latency requirement, that would disqualify most, if not all, satellite systems from PR/USVI Funding. This result would defeat the Commission's goal of ensuring that the Islands' residents, public safety entities, businesses, and community anchor institutions have access to resilient, storm-graded networks.[39]

Terrestrial communications networks struggle to withstand the forces of a natural disaster, such as a hurricane or flood, often being toppled, washed out, pulled down, or severed. Satellite-based communication infrastructures are not exposed to the same terrestrial vulnerabilities wrought by

[38] *See generally* Disaster Relief Comments; *see also* Liga de Cooperativas Comments.
[39] *C.f.* PR/USVI Fund NPRM, at ¶ 34.

storms and other disasters, making them extremely well situated to provide resilient continuity of service communications as well as emergency communication services in communities where terrestrial infrastructure has been damaged. This is well-documented and tragically demonstrated again during the 2017 hurricane season.[40]

While no network will be impervious to all disasters nor able to meet every potential need scenario, there is significant room for governments, the private sector, and consumers to be better prepared in the face of emergencies. Failure to design and implement resilient communications infrastructure prior to an emergency consistently results in increased time without a communications solution, as was seen during Superstorm Sandy.[41]

Despite the proven quality and resiliency of satellite broadband services, the Commission continues to adopt and propose restrictions and penalties on participating services that have no technical basis and that discriminate against those technologies that could provide much needed resiliency.[42] Just as the Commission offers no technical reason for eliminating the incentives for higher performance tiers to receive USF support in Puerto Rico and the U.S. Virgin Islands, it offers no basis for the arbitrary adoption of a latency requirement; especially in light of the clear benefits of satellite broadband communications for these territories.

Satellite broadband customers are as satisfied as the customers of other broadband services,[43] notwithstanding the inevitable latency resulting from the data travel time to and from a

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[40] *See generally* Disaster Relief Comments.
[41] Jim McKay, "Sandy Created a Black Hole of Communication" Emergency Preparedness (January 28, 2013), *available at* http://www.govtech.com/em/disaster/Sandy-Black-Hole-of-Communication.html.
[42] *See, e.g., Connect America Fund*, Order, DA 18-710 (2018).
[43] *Ex Parte* Letter from L. Charles Keller, Attorney for Hughes Network Systems, Inc. to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 (filed May 11, 2016) ("Market research shows that satellite broadband customers are in the middle of the pack among all

geostationary orbit satellite.[44] As the 2015 Measuring Broadband Report and the subsequent 2016 Broadband Progress Report conclude, "less interactive applications such as web browsing and video streaming" are "unlikely" to be affected by such "differences in average latencies across" the types of applications that comprise the substantial majority of Internet traffic.[45] In fact, video streaming alone already accounts for more than 60 percent of peak downstream traffic over fixed broadband facilities in North America,[46] and video streaming and downloads together are predicted to grow to more than 80 percent of *all* consumer Internet traffic by 2020.[47]

Satellite broadband is a competitive alternative to terrestrial services. One leading satellite broadband provider reports that a third of its current customer base had switched to its services

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broadband customers in satisfaction levels. Data from Consumer Reports demonstrates that recent broadband consumer satisfaction surveys put ViaSat/WildBlue at or above the level of cable broadband and DSL."); Comments of ViaSat, Inc., WC Docket Nos. 10-90, 14-58, 14-259, at 5-6 (Jul. 21, 2016) ("ViaSat CAF Comments") ("ViaSat's satellite broadband service … now has an overall user satisfaction rating that is on par with that of leading cable-based broadband service providers").

[44] *See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, Report, 31 FCC Rcd 699 at note 162 (2016) ("2016 Broadband Progress Report"); *2015 Measuring Broadband in America: A Report on Consumer Fixed Broadband Performance in the United States*, FCC at 17 (2015) ("2015 Measuring Broadband Report"), *available at* http://data.fcc.gov/download/measuring-broadband-america/2015/2015-Fixed-Measuring-Broadband-America-Report.pdf .

[45] 2015 Measuring Broadband Report, at ¶ 7 ("[D]ifferences in average latencies across all technologies are unlikely to affect less interactive applications such as web browsing and video streaming"); *ibid* at ¶ 18 ("Highly interactive applications" include VoIP calls, video chat, and online multiplayer games.); *see also* 2016 Broadband Progress Report at ¶ 108.

[46] *See* 2015 Measuring Broadband Report, at ¶ 7 note 3.

[47] Cisco, Cisco Visual Networking Index: Forecast and Methodology 2015-2020 at 14, (Jun. 1, 2016) [WHITE PAPER], *available at* http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/complete-white-paper-c11-481360.pdf. *Accord Connect America Fund; ETC Annual Reports and Certifications Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) from Obsolete ILEC Regulatory Obligations that Inhibit Deployment of Next-Generation Networks*, Report and Order, 29 FCC Rcd 15644 at para. 23 (2014) ("We expect carriers planning upgrades to their networks today would take into account near term and future consumer demand.").

from terrestrial broadband providers.[48] With the introduction of its Gen5 service, Hughes has experienced four consecutive quarters of decreased retail consumer churn, demonstrating that customers are trying the service and staying with it, even when there are alternatives available.[49] In order to provide a successful solution for quality, resilient, reliable broadband services, the Commission must move away from unfounded latency requirements and fully embrace satellite services as a level competitor for broadband funds.

The Commission must also consider the views expressed by the residents and businesses in Puerto Rico and the U.S. Virgin Islands. Organizations within Puerto Rico have asked the Commission to adopt satellite broadband as an essential component of a resilient network framework, recognizing that satellite broadband provided reliable service following the storms and can be restored without delay should the minimal ground infrastructure be damaged.[50] Additionally, organizations in Puerto Rico are collaborating to develop their own resilient, redundant satellite-based broadband infrastructure as they know from their first-hand experience that this was the only reliable service available to them in the wake of the hurricanes.[51] It is critical that the Commission take these views into account as it determines how to best allocate the PR/USVI Funds and meet the Commission's goals, including network resiliency.

In adopting technical standards for the network in Puerto Rico and the U.S. Virgin Island, the Commission must also be guided by the principles of technology neutrality. Accordingly, the Commission should avoid adopting across the board standards like TIA-222-H, which is solely a

[48] ViaSat CAF Comments, at ¶ 6.
[49] EchoStar First Quarter 2018 Investor Call (May 10, 2018).
[50] Liga de Cooperativas Comments; *see also* Comments of the Puerto Rico Manufacturers Association, WC Docket No. 18-143 (Jul. 3, 2018) ("*PRMA Comments*"); *see also* Casa Pueblo, WC Docket No. 18-143 et. al (Jul. 5, 2018) ("*Casa Pueblo Comments*").
[51] *See* Liga de Cooperativas Comments; *see also* Casa Pueblo Comments.

terrestrial standard. Instead, the Commission should ensure that any standards it adopts are technology neutral.

D. The Commission Must Not Fall Back to Unproven Subjective Means to Award Universal Service Funding

For many years, licenses and access to scarce resources, such as funding, were awarded based on subjective procedures, such as beauty contests and comparative hearings.[52] However, the Commission and other government regulators repeatedly found that the result of such procedures would fail to award the authorization in a manner that guaranteed efficient use of the award. Additionally, given the subjective nature of the process, bias was often captured in the award, further working against obtaining a result that best utilized the resource and served the public interest. To address these issues, regulators looked to objective means to resolve these problems.

In the early 1990s, regulators, led by the Commission, started to incorporate the use of competitive auctions into these processes.[53] The use of an auction enables winners to be chosen using a single set of objective criteria. Auctions were also seen as a positive sign that the resource would be put to use because of the value the auction winner placed on its bid.[54]

Over 30 years of experience has demonstrated that auctions, while not without fault, are a solid and equitable way to run a competitive process to award scarce resources, such as access to

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[52] Timothy C. Salmon, *Spectrum Auctions by the United States Federal Communications Commission*, Florida State University (Dec. 6, 2002), *available at* http://faculty.smu.edu/tsalmon/fccchapter.pdf.
[53] *See* Andrea Prat & Tommaso Valletti, *Spectrum Auctions Versus Beauty Contests: Costs and Benefits* at 3 (Nov. 2000) (first draft) [White Paper], *available at* https://www.unicatt.it/istituti/economiaimpresalavoro/convegni/OECD-draft.pdf.
[54] Ibid at 18.

funding and spectrum.[55] Despite this abundant evidence, and without any public policy rationale to the contrary, the Commission proposes a non-transparent, sealed bid approach, to be judged, assumedly, by Commission staff.[56] While an auction can take time to set up and process, there is no evidence that a subjective competitive proposal approach would work any faster. The PR/USVI Fund NPRM offers so little guidance as to what the procedure would be for evaluating competitive proposal that it is likely the competitive proposal approach would take as long as an auction.

Contrary to the Commission's reasoning in the PR/USVI Fund NPRM, the current framework in Puerto Rico and the U.S. Virgin Islands is exactly the reason why an auction should be utilized in lieu of any subjective process.[57] The existence of monopoly carriers on the affected Islands is exactly the market where an auction is necessary in order to put a new entrant on equal footing to the incumbent for access to funding.[58] Accordingly, Hughes urges the Commission to adopt an auction approach to award funding and to seek further comment, expeditiously, on the specific procedures to govern this auction.

IV. CONCLUSION

The Commission has a responsibility to ensure that Puerto Rico and the U.S. Virgin Islands benefit from access to quality, high speed, reliable broadband services available to the rest of the United States through the considered use of universal service funding. Thus, the Commission must adopt participation criteria that ensure that the residents of these territories benefit from resilient, Commission-defined advanced broadband services, at and exceeding speeds of 25/3 Mbps, and

[55] *See* Salmon, note 52 *supra*.
[56] The NPRM makes no reference to a neutral third party reviewer of bids. *See* PR/USVI Fund NPRM.
[57] *See* PR/USVI Fund NPRM, at ¶¶ 35-39.
[58] *See, e.g.*, Prat and Valletti, note 53 *supra*, at 22.

ensure that the PR/USVI USF Fund is technology neutral. To best achieve this, the Commission must utilize an objective funding award method such as an ascending auction.

Respectfully submitted,

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